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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/663,834

09/17/2003

Jae-Hwan Hyun

1349.1295

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12/08/2006

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EXAMINER

MORRISON, THOMAS A

ART UNIT

PAPER NUMBER

3653

DATE MAILED: 12/08/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/663,834

Applicant(s)

HYUN, JAE-HWAN

Examiner

Thomas A. Morrison

Art Unit

3653

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 02 October 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 2-18, 20 and 23-35 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 2-6 is/are allowed.
- 6) ☒ Claim(s) 7-18, 20 and 23-35 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                       | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## DETAILED ACTION

### *Claim Rejections - 35 USC § 112*

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

1. Claims 7-18, 20 and 23-35 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 7 recites the limitation "the paper pressing plate" in line 6. There is insufficient antecedent basis for this limitation in the claim.

Claim 7 recites "a paper feed cassette" in line 6. Later, claim 7 recites "a paper feed cassette" in lines 15-16. It is unclear if the recited "a paper feed cassette" in lines 15-16 is the same or different from the previously recited "a paper feed cassette" in line 6. As such, it is unclear how many different paper feed cassettes are claimed.

Claim 11 recites, "a third lever extending in a third direction from the center of the actuator, wherein **the third lever** is heavier than a combined weight of the first lever and the second lever, is inserted into the second slot when no paper is stacked in the paper feed cassette, causes the actuator to pivot such that the first lever enters the sensing area of the sensor, **is light enough so as to be moved by the impact brought by a paper**, and allows the actuator to pivot such that the second lever enters the sensing area of the sensor when the paper moves along the duplex printing paper path". (emphasis added). Is this impact brought by a paper **against the second lever** as the paper is fed along the duplex printing paper path? See e.g., Fig. 5 of the instant

application. Alternatively, is this impact brought by paper **against the third lever**? See e.g., Fig. 3 of the instant application.

Claim 23 recites “a rear end of the second slot in the pressing plate to stop the **second** lever from pivoting.” (emphasis added). Claim 23 appears to be inaccurate. Does the rear end of the second slot stop the second lever or the third lever from pivoting? In particular, based on Fig. 4 of the instant application, it appears that the second slot stops the third lever (113) from pivoting.

Claim 34 recites “wherein when a rear end of the paper being fed along the duplex printing paper path leaves **a slot of the hinge shaft** under the a duplex printing paper path, the second lever enters the slot in the duplex printing paper path”. (emphasis added). This recitation appears to be inaccurate, in that there does not appear to be any slot of the hinge shaft (105) shown in Fig. 2 of the instant application.

Claim 35 is rejected under 35 U.S.C. 112, second paragraph, as being incomplete for omitting essential structural cooperative relationships of elements, such omission amounting to a gap between the necessary structural connections. See MPEP § 2172.01. The omitted structural cooperative relationships are: (1) the structure or structural relationship between the recited elements in claim 35 that allows the actuator to function, as claimed.

More specifically, claim 35 recites “an actuator pivotably disposed above a paper feed cassette and below a duplex printing paper path, that is moved by a paper”, and then claim 35 recites “when the actuator pivots in a predetermined angle...” These recitations do not provide enough structural relationship between the elements to

understand **how the actuator pivots in a predetermined angle** such that the paper sensor generates a signal, as claimed. For example, there needs to be some structural relationship recited in claim 35 between the paper feed cassette and the actuator to understand how the actuator pivots in a predetermined angle so that the paper sensor generates the signal upon sensing the actuator pivot, e.g., when no paper is stacked in the paper feed cassette. As another example, there needs to be some structural relationship recited in claim 35 between the duplex printing paper path and the actuator to understand how the actuator pivots in a predetermined angle such that the paper sensor generates the signal upon sensing the actuator pivot, e.g., when paper is being fed along the duplex printing paper path. Is a portion of the actuator located in the duplex printing paper path so that the actuator is moved by a paper fed along the duplex printing paper path? Is the actuator moved downward into the cassette by the weight of the actuator when there is not any paper stacked in the cassette?

### ***Response to Arguments***

2. Applicant's arguments filed 10/02/2006 have been fully considered but they are not persuasive. Applicant argues

Claims 7-34 were indicated as being allowable if rewritten or amended to overcome the rejection(s) under 35 U.S.C. 112, para. 2. Claims 7 and 11 have been amended to clarify same. Claim 35 has been amended to clarify same. In view of the above amendments, it is respectfully requested that the Examiner reconsider the objection.

In response, the indefiniteness rejections of claims 7-18, 20 and 23-35 are outlined above. Thus, there are some outstanding rejections under 35 U.S.C. 112, second paragraph that need to be overcome.

***Allowable Subject Matter***

3. Claims 2-6 are allowed. Claims 7-18, 20 and 23-34 would be allowable if rewritten or amended to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action. Claim 35 is too unclear to make a determination as to the allowability of this claim.

***Conclusion***

4. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.


5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thomas A. Morrison whose telephone number is (571) 272-7221. The examiner can normally be reached on M-F, 8am - 5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Patrick Mackey can be reached on (571) 272-6916. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 3653

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

11/30/2006



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